

### Claims

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1. A method for allocating bandwidth on-demand to a constant bit rate connection in a wireless MAN access network, in particular in a LMDS access network,  
10        wherein said method comprises the steps of:  
             sending from a transmitter a data packet to a receiver, the data packet comprises a parameter indicating whether additional bandwidth is required for jitter compensation;  
             allocating additional bandwidth to the connection based on said  
15        parameter; and  
             setting said parameter based on the time data have spent in a transmit queue assigned to the constant bit rate connection at the transmitter.
2. The method for allocating bandwidth according to claim 1,  
20        wherein the method further comprises the step of allocating fixed size grants at periodic intervals to the connection, wherein a grant includes several packets.
3. A transmitter for wireless MAN access networks, in particular for LMDS  
25        access networks, where bandwidth is allocated on-demand to one or several constant bit rate connections,

wherein the transmitter comprises: a connection control unit for generating data packets assigned to the connection and sent to a receiver, the generated data packets comprise a parameter indicating whether additional bandwidth is required for jitter compensation to request the allocation of additional bandwidth to the connection based on said parameter; and  
a parameter control unit for setting said parameter based on the time data have spent in a transmit queue assigned to the constant bit rate connection at the transmitter.

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4. The transmitter according to claim 3,  
wherein the parameter control unit is adapted to set said parameter, if data have spent a time longer than a predefined threshold delay in the transmit queue.

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5. The transmitter according to claim 3,  
wherein the parameter control unit is adapted for calculating packet delay times; applying a PI filter on packet delay times; and setting said parameter, if the output value of the PI filter exceeds a predefined threshold.

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6. The transmitter according to claim 5,  
wherein the parameter control unit is adapted to use the average delay time of the packets of a grant as input value for the PI filter.

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7. The transmitter according to claim 3,

wherein the parameter control unit is adapted to perform parameter setting calculations for all packets of a grant .

- 5       8.   The transmitter according to claim 3,  
          wherein the parameter control unit is adapted to perform parameter setting calculations only for the last packet of a grant.
- 10      9.   The transmitter according to claim 3,  
          wherein the parameter control unit is adapted for assigning a time-stamp to each packet inserted in the transmit queue; evaluating the time-stamps when transmitting the corresponding packets to the receiver; and calculating packet delay times based on said evaluation.
- 15      10.   Subscriber station for a wireless MAN access network, in particular for a LMDS access network,  
          wherein the subscriber station comprising the transmitter according to claim 3.